

TITLE 329 SOLID WASTE MANAGEMENT BOARD

Proposed Rule LSA Document #08-55

DIGEST

Amendments to 329 IAC 9 concerning additional protections for ground water by under-dispenser spill containment of underground storage tanks and the secondary containment of any new or replaced underground storage tanks. Effective 30 days after filing with the Publisher.

HISTORY

First Notice of Comment Period: January 30, 2008, Indiana Register (DIN: 20080130-IR-329080055FNA).

Second Notice of Comment Period: June 11, 2008, Indiana Register (DIN: 20080611-IR-329080055SNA).

Notice of First Hearing: July 15, 2008, Indiana Register (DIN: 20080611-IR-329080055PHA).

PUBLIC COMMENTS UNDER IC 13-14-9-4.5

IC 13-14-9-4.5 states that a board may not adopt a rule under IC 13-14-9 that is substantially different from the draft rule published under IC 13-14-9-4 until the board has conducted a third comment period that is at least 21 days long. Because this proposed rule is not substantially different from the draft rule published on June 11, 2008, at DIN: 20080611-IR-329080055SNA, the Indiana Department of Environmental Management (IDEM) is not requesting additional comment on this proposed rule.

SUMMARY/RESPONSE TO COMMENTS RECEIVED FROM THE SECOND COMMENT PERIOD

The Indiana Department of Environmental Management (IDEM) requested public comment from June 12, 2008, through July 11, 2008, on IDEM's draft rule language. Comments were received from the following:

John D. Austin, VR/Manager, Modern Welding Company (MW)
of Owensboro, Inc.
Christopher J. Braun, General Counsel, (PSRB)
Indiana Petroleum Marketers and Convenience Store Association

Comment: Modern Welding and our fellow subsidiaries that manufacture and ship tanks for underground installation in Indiana would like to express our support for this proposed requirement. Double walled tanks do not double the cost of a tank; double walled tanks are 15-20% higher in price. Ground water protection is best accomplished with double walled tanks. (MW)

Response: Thank you.

Comment: As an initial matter, IDEM's current system for UST compliance has been working well for several years and has been locally adopted and complied with by the UST regulated community. The decision to mandate the status, and in time, these UST owners to accept a regulatory program to address a problem that may exist in other states that have insolvent UST funds, imposes an unnecessary and costly expense on owners. This is particularly difficult during these times of high gas prices. However, adopting the secondary containment option will impose even greater burdens and expenses on Indiana's fledgling alternative fueling option, E-85. IDEM has substantially understated the economic impact of secondary containment. The cost of monitored, double-walled tanks is twice as much as single-walled tanks. The cost of monitored, doubled-walled piping for typical small to medium-sized stations is three times as much as single-walled systems. IDEM should reconsider its position and adopting EPA's financial responsibility option. Because the principal source of UST releases is piping, not tanks, requiring costly secondary containment for USTs is not economical. UST manufacturers' and installers' liability insurance covers their liabilities and adopting the financial responsibility option will not impose a new burden on them. The increased costs of secondary containment would further diminish the support for alternative fuels, such as E85. (PSRB)

Response: After a great deal of deliberation the department is recommending that the board adopt a rule requiring secondary containment of tanks installed after the rule is effective. It is the department's position that the additional cost to purchase and install a tank with secondary containment is far out-weighted by the cost of remediating a leak from a single-walled tank. In addition, the 30-year time commitment for tank and piping manufacturers and the 10-year time commitment for installers to maintain appropriate insurance can be expected to cause prominent manufacturers and installers to stop doing business in a state that mandates financial responsibility. If a particular tank or piping manufacturer decides to close their business, there is not an insurance product available to cover the remaining 30 years or 10 years of liability, as applicable. The financial responsibility requirements on the manufacturer and installer will likely lead to increased litigation as to the fault or responsibility of a party. In addition, it would be expected that requiring financial responsibility from tank installer and tank manufacturers would result in increased single-walled tank and installation costs borne by the owner and operator that would be passed onto the product consumer. While some installers' and tank manufacturers' comprehensive general liability insurance may provide some measure of financial responsibility, the language in any individual policy is subject to change and is always subject to differing legal interpretations and therefore cannot meet current federal standards. In the long term, the financial responsibility option is a much less reliable option than secondary containment of tank systems and piping.

SUMMARY/RESPONSE TO COMMENTS RECEIVED AT THE FIRST PUBLIC HEARING

On July 15, 2008, the Solid Waste Management Board (board) conducted the first public hearing/meeting concerning additional protections for ground water by under-

dispenser spill containment of underground storage tanks and the secondary containment of any new or replaced underground storage tanks. Comments were made at the first hearing/meeting by the following:

John Austin, Modern Welding Company	(MW)
John Childs, Mid-Valley Supply	(MVS)
Bill Greer, Indiana Petroleum and Environmental Contractor's Association	(IPECA)
Michael Schutz, August Mack Environmental	(AGM)
Keith Welch, K & W Fueling Systems	(K&W)
Harry Beals, Williams, Beck, and Hess	(WB&H)
Pat Kennedy, Kennedy Tank and Manufacturing Company	(KTM)
Angela Dorrell, Indiana Petroleum Marketers and Convenience Store Association	(PSRB)

Following is a summary of the comments received and IDEM's responses thereto:

Comment: Modern Welding and our fellow subsidiaries that manufacture and ship tanks for underground installation in Indiana would like to express our support for this proposed requirement. Double walled tanks do not double the cost of a tank; double walled tanks are 15-20% higher in price. Ground water protection is best accomplished with double walled tanks. There is a limit to the insurance products available to us. (MW)

Response: IDEM agrees.

Comment: We support secondary containment because financial assurance does not stop leaks and I believe double-walled tanks and double-walled piping systems go to a great extent to do that. In their very nature, you're monitoring that interstitial space and as soon as you get liquid in that space, your monitoring tells you that inner tank is leaking, whereas financial responsibility addresses a disaster after it's happened and then tries to figure out who's to blame. (MVS)

Response: IDEM agrees.

Comment: We are here to support the proposed rule. Installing secondary containment tanks helps prevent leaks; financial responsibility only insures that someone will be able to pay for a leak after it occurs. Requiring the installers to have additional insurance coverage is not going to provide any additional incentive for them other than to cause them to increase their prices in order to cover unforeseen future litigation expenses. Several contractors have stated that if financial responsibility were adopted that they would only sell and install double-walled tanks anyway. Cost to the tank owner would increase because of the fear of litigation. Can 48 States be wrong? There is concern that the Excess Liability Trust would not be used to pay for leaks but installers would be charged first. Iowa has actually hired a third-party subrogator to go after installers before they have to look at using the state trust fund. Some smaller installers will go out of business in states that adopt the financial responsibility option. Less installers will equate to higher prices and also availability for installations. EPA requires that states

that go with financial responsibility be able to monitor and follow the acquisition of this insurance by certified installers. Is the Indiana State Fire Marshal's Office manned adequately to undertake this monitoring of equipment? (IPECA)

Response: It is the department's position that the additional cost to purchase and install a tank with secondary containment is far out-weighted by the cost of remediating a leak from a single-walled tank and is therefore not pursuing the financial responsibility option.

Comment: I am here, along with Bill and the other members of IPECA, should it be necessary to add some perspective on the cost and impact and disruption of remediation, and since this conversation hasn't really gone that direction, I don't think it is necessary for me to comment. (AGM)

Response: Thank you.

Comment: The impacts of remediation if a release were to occur, and the high expense of remediation, investigating the extent of the problem and cleaning up the problem, which can be anywhere from a 100 to 300 or 400 thousand dollars or more, especially if ground water's impacted, but also many disruptions to the operation of the facility because of the equipment things necessary to get the job done. Many of these cleanups take several years with remediation equipment that have power requirements and emissions to the atmosphere, discharges of wastewater or treated wastewater, so there's many impacts associated with remediation that can be avoided through secondary containment. (AGM)

Response: It is the department's position that the additional cost to purchase and install a tank with secondary containment is far out-weighted by the cost of remediating a leak from a single-walled tank and is therefore not pursuing the financial responsibility option.

Comment: We support secondary containment. I think money does play a roll in just about every element of our economy at this time. We have to protect the environment, we have to protect our ground water, and the only way to do that successfully is through secondary containment. There are monitors out there, sensors and everything, that will detect down to .1 whatever you call of a gallon every hour, so those things are out there in place to protect our environment. As far as price, if that's what the real cause for deciding between the two is, installation is a minimal change, if any at all. A tank is a tank, with a double-walled containment, you're only looking at a couple inches longer, a couple inches more in diameter. A hole's a hole, and there's not going to be much difference in the installation cost, and that includes your backfill material, your concrete. Everything's really going to stay the same. If we go to financial responsibility, and with talks with our insurance company, there's really nothing out there for the owner of the company or whatever it may be except to buy a trailer. Say in 2018 we have a leak from 2008. He's been out of business for five years. He would have to have a trailer that follows him just to protect and that cost will be passed on. One thing we've looked at is insuring each separate site with a policy for that 10-year period. There is no 10-year period out there; you have to renew it every year. We installed 49 tanks in 2006. In 2007 we installed 48 tanks. That's a lot of tanks. That cost will be

passed on. Basically, 99.9 percent of what we're putting in now is double-walled. I don't think we've put in a single-walled tank in probably 5 years. The cost is no different. Your minimal cost that he was talking about was in pieces and parts due to the monitoring systems, but it's minimal when you consider our environment. (K&W)

Response: Thank you for the information.

Comment: Williams, Beck, and Hess is a petroleum service contractor in business for 56 years. Common sense tells me that secondary containment is the solution. With secondary containment, you have a monitored containment between the primary storage and soil/water contamination. Financial responsibility addresses the aftermath. It's been said and statistics have shown that single-walled tanks haven't been a major issue in releases in Indiana. Well, after 31 years of cleaning and inspecting underground tanks, I can tell you that there's a lot of leaking, has been and still are in single-walled tanks. It doesn't mean that they're releasing petroleum to the environment; they're taking water on. The nature of the soils in Indiana are clay based, and you dig an excavation to put a single-walled tank in or a tank in, and you backfill it with a noncorrosive material that will hold water, you create the bathtub effect, so the tank corrodes and finally starts leaking, normally it taking water on and not releasing hydrocarbons. I still don't see this as an acceptable solution. So single-walled tanks haven't been a real issue in releases that true, but there's a reason why and I don't think the reason why is acceptable either. (WB&H)

Response: The department appreciates the information regarding tanks and the input on this rulemaking.

Comment: The other point I wanted to make, cost-wise, from our history, from our past, if you have a hundred-thousand dollar, single walled tank system installation, it costs less than 10 thousand to make it a double-walled system. We have taken the stand to only put in double-walled systems for the last 5 years and I can guarantee you my policies are not going to change. We won't put in a single-walled system, financial responsibility or not, because of that potential liability, and because with double-walled systems, you've got monitoring that now is telling the operator that "Hey, there's something wrong. Let's find it before we have a release." (WB&H)

Response: Thank you.

Comment: I'm here to support secondary containment as well. In our minds, secondary containment is the better direction versus financial responsibility, much better environmentally, and pretty much a negligible cost increase while looking at the total project cost on an entire installation. I know the cost increase is relative number, but it's definitely much better from a risk-management standpoint as well, and as far as a cost difference, it can be as low as a 20-percent difference from a single-walled technology to a double walled technology. (KTM)

Response: This is consistent with information from other commentors.

Comment: The insurance requirements for financial responsibility are a concern of ours. Typically the pollution insurance, the environmental impairment liability insurance, is written on a claims-made basis, not an occurrence basis. If a tank

manufacturer or an installer, for whatever reason, would decide to get out of the business or close his business, there is not an insurance product available to cover the remaining 30 years for manufacturing or 10 years for the installers. Currently, under that type of scenario, you might be able to get a two-to-three year nose for a significant amount of money, but nothing like 10 or 30 years. The 30-year time commitment for tank and piping manufacturers and the 10 years for installers could definitely cause prominent manufacturers and installers to stop performing business in states that adopt financial responsibility. Under the financial responsibility, manufacturers and installers would be required to have far more extensive coverage than the tank owners or the operators, who are liable for the cleanup and ultimately responsible for maintaining the tank systems. This makes no sense to us. If financial responsibility were adopted, we believe that manufacturers and installers would be drug into a tremendous amount of litigation. Most problems or leaks are not black-and-white scenarios. You've got your manufacturers, you've got your installers, you've got subcontractors who work for the primary installer, you've got your maintenance contractors, as well as you've got generally the owner/operator who has staff that do some maintenance on the tank as well. So, there are a lot of hands in the pot. Many times the problems result from an accumulation of errors or negligent work by different parties. We believe under the financial responsibility requirement, the manufacturers and installers would be the primary targets of the plaintiffs in future disputes. I've been on the Board of the Steel Tank Insurance Company for the past 18 years. We set up a captive insurance company back in 1988, as a result of the fact that the tank manufacturers in the country could not obtain pollution insurance. As a member of that Board, we review claims history very closely. The State of Indiana has been very fortunate to date as far as relatively few claims, but nationwide, claim activity has been much higher than we've seen here in this state. The litigation that goes on in these types of cases is very onerous for everyone concerned. Again we support secondary containment.

(KTM)

Response: IDEM agrees with the concerns expressed in this comment.

Comment: The IPCA urges the Board to require the reconsideration of the financial responsibility option in lieu of the more costly secondary containment. Indiana's small-to-medium-sized petroleum marketers support the option of financial responsibility for 6 main reasons. First, the regulated community and IDEM would agree with the results of leak autopsy studies that have been performed around the country which demonstrated that the principle source of UST system releases is piping, not the tanks, and in 2007, the IPCA worked with General Assembly members to enact a law requiring secondary containment of piping to address that very issue. (PSRB)

Response: IDEM agrees that piping is often the sources of leaks but it is not the sole source. IDEM also supports the statutory change mentioned by the commentor.

Comment: Second, secondary containment poses a significant financial burden on small-to medium-sized petroleum outfits that are already struggling to survive in an uncertain economic climate, and our position is that the fiscal impact analysis does not accurately reflect the actual costs that will be imposed upon small-to medium-sized petroleum marketers. We believe that for a monitored double-walled tank, the cost can

be as much as double a single-walled tank. The cost of secondarily contained piping and monitoring systems can be as much as three times the cost of single-walled piping. (PSRB)

Response: Other commentors involved with the installation of tank systems have indicated that the cost is not as significant as portrayed in this comment.

Comment: Third, financial responsibility has successfully been implemented in other states that adopted the financial responsibility option and they have not experienced many of the problems that you've heard voiced here today. Manufacturers and installers are readily available; there's not been any increase in litigation. Concerns that there would be an increase in litigation as a result of the adoption of financial responsibility is really uninformed, as currently, those manufacturers and installers in Indiana are responsible and can be held legally liable today for a faulty tank that's been improperly manufactured or installed. Financial responsibility does not affect that. (PSRB)

Response: Only two other states have adopted a form of financial responsibility and it has not been in effect long enough to judge impacts on litigation levels. Contact with those states have revealed they are encountering problems with finding insurance policies that will cover a 10 year or 30 year timeframe.

Comment: Fourth, financial responsibility is consistent with existing management practices of reputable companies who already maintain general liability policies to cover those actual emissions that occur. The typical type of policy that's issued to cover this work is occurrence based, meaning 30 years from now, if there's a release and it's attributed to a manufacturer or installation, and we look to the policy that was in place at the time the occurrence occurred, even if that manufacturer or installer no longer carries that particular policy. (PSRB)

Response: While Indiana has been identified as a state where such claims against past policies have been successful that is not necessarily a good indicator of how future policies may be enforced.

Comment: Fifth, financial responsibility is consistent with Indiana's financial responsibility or assurance program under the Excess Liability Trust Fund (ELTF) for addressing liabilities arising from leaking underground storage tanks. (PSRB)

Response: IDEM believes that requiring secondary containment of tanks will reduce the number of future claims against the ELTF and further promote its stability.

Comment: Lastly, financial responsibility is consistent with Indiana's initiative to support the state's alternative energy program for E-85 fuels. The increased cost imposed by secondary containment will preclude small-to medium-sized petroleum marketers from investing in alternative fuel technology. The IPCA's position is that IDEM should perform a cost-benefit analysis and should reconsider financial responsibility as an alternative to the more costly secondary containment option. (PSRB)

Response: The department has performed a fiscal impact on this rulemaking and has not found the rule to be burdensome to owners and operators of petroleum marketers in general.

DRAFT RULE

SECTION 1. 329 IAC 9-1-18.5 IS ADDED TO READ AS FOLLOWS:

329 IAC 9-1-18.5 "Existing" defined

Authority: IC 13-14-8-1; IC 13-14-8-2; IC 13-23-1-1; IC 13-23-1-2

Affected: IC 13-18-17-6; IC 13-23-3

Sec. 18.5. "Existing" means that a:

- (1) tank;**
- (2) piping;**
- (3) motor fuel dispensing system;**
- (4) facility;**
- (5) community public water supply system (CPWSS); or**
- (6) potable drinking water well;**

is in place prior to beginning the installation or replacement of a tank, piping, or motor fuel dispensing system. The term includes a potable drinking water well that the UST owner has or will install at a new underground storage tank facility regardless of whether the well is installed before or after the tanks, piping, and motor fuel dispenser systems.

(Solid Waste Management Board; 329 IAC 9-1-18.5)

SECTION 2. 329 IAC 9-1-27.5 IS ADDED TO READ AS FOLLOWS:

329 IAC 9-1-27.5 "Interstitial monitoring" defined

Authority: IC 13-14-8-1; IC 13-14-8-2; IC 13-23-1-1; IC 13-23-1-2

Affected: IC 13-18-17-6; IC 13-23-3

Sec. 27.5. "Interstitial monitoring" means a release detection method that continuously monitors the interstitial space of an underground storage tank and piping. The term includes only those release detection systems that are capable of detecting a breach in the primary containment of the underground storage tank and piping component being monitored before the regulated substance or petroleum stored is released to the environment.

(Solid Waste Management Board; 329 IAC 9-1-27.5)

SECTION 3. 329 IAC 9-1-27.6 IS ADDED TO READ AS FOLLOWS:

329 IAC 9-1-27.6 "Interstitial space" defined

Authority: IC 13-14-8-1; IC 13-14-8-2; IC 13-23-1-1; IC 13-23-1-2

Affected: IC 13-18-17-6; IC 13-23-3

Sec. 27.6. "Interstitial space" means the space between the primary and secondary containment systems.

(Solid Waste Management Board; 329 IAC 9-1-27.6)

SECTION 4. 329 IAC 9-1-27.8 IS ADDED TO READ AS FOLLOWS:

329 IAC 9-1-27.8 "Karst terrains" defined

Authority: IC 13-14-8-1; IC 13-14-8-2; IC 13-23-1-1; IC 13-23-1-2

Affected: IC 13-18-17-6; IC 13-23-3

Sec. 27.8. "Karst terrains" means an area where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present to karst terrains include any of the following:

- (1) Sinkholes.**
- (2) Sinking streams.**
- (3) Caves.**
- (4) Large springs.**
- (5) Blind valleys.**
- (6) Grikes.**
- (7) Karren.**
- (8) Solution widened joints or bedding planes.**
- (9) Loss of drilling fluid during core drilling.**
- (10) Anasotmosis, and conduits of less than one (1) meter, but more than two and five-tenths (2.5) millimeters.**
- (11) Karst aquifer.**

(Solid Waste Management Board; 329 IAC 9-1-27.8)

SECTION 5. 329 IAC 9-1-37 IS AMENDED TO READ AS FOLLOWS:

329 IAC 9-1-37 "Pipe" or "piping" defined

Authority: IC 13-14-8-1; IC 13-14-8-2; IC 13-23-1-1; IC 13-23-1-2

Affected: IC 13-18-17-6; IC 13-23-3

Sec. 37. (a) "Pipe" or "piping" means a hollow cylinder or tubular conduit that is constructed of nonearthen materials that routinely contains and conveys regulated substances from the tank or tanks to the dispenser or other end-use equipment. The term includes a suction system for product delivery under 329 IAC 9-7-2(2)(B).

(b) The term does not include vent, vapor recovery, or fill lines that do not routinely contain regulated substances.

(Solid Waste Management Board; 329 IAC 9-1-37; filed Dec 1, 1992, 5:00 p.m.: 16 IR 1067; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535)

SECTION 6. 329 IAC 9-1-40.5 IS ADDED TO READ AS FOLLOWS:

329 IAC 9-1-40.5 "Replaced" defined

Authority: IC 13-14-8-1; IC 13-14-8-2; IC 13-23-1-1; IC 13-23-1-2

Affected: IC 13-18-17-6; IC 13-23-3

Sec. 40.5. "Replaced" means the permanent removal from service and the new installation of any of the following:

(1) An underground storage tank.

(2) More than fifty percent (50%) of the length of any underground piping between the tank and the dispenser or other end-use equipment at any one (1) time.

(3) A motor fuel dispenser system and the equipment necessary to connect the dispenser to the underground storage tank system. For purposes of this definition, this equipment includes flexible connectors, risers, or other transitional components that are beneath the dispenser and connect the dispenser to the piping.

(Solid Waste Management Board; 329 IAC 9-1-40.5)

SECTION 7. 329 IAC 9-1-41.8 IS ADDED TO READ AS FOLLOWS:

329 IAC 9-1-41.8 "Secondary containment" defined

Authority: IC 13-14-8-1; IC 13-14-8-2; IC 13-23-1-1; IC 13-23-1-2

Affected: IC 13-18-17-6; IC 13-23-3

Sec. 41.8. "Secondary containment" means a release detection system that meets the requirements of 329 IAC 9-7-4(7), but does not include an under-dispenser spill containment system.

(Solid Waste Management Board; 329 IAC 9-1-41.8)

SECTION 8. 329 IAC 9-1-45.5 IS ADDED TO READ AS FOLLOWS:

329 IAC 9-1-45.5 "Under-dispenser spill containment" defined

Authority: IC 13-14-8-1; IC 13-14-8-2; IC 13-23-1-1; IC 13-23-1-2

Affected: IC 13-18-17-6; IC 13-23-3

Sec. 45.5. (a) "Under-dispenser spill containment" means a device that is capable of preventing an unauthorized release from under the dispenser from entering the soil or ground water, or both.

(b) Under-dispenser spill containment must:

(1) not allow liquid to penetrate on any side or bottom;

- (2) be compatible with the substance conveyed by the piping; and**
- (3) allow for visual inspection and access to the components in the under-dispenser spill containment system.**

(Solid Waste Management Board; 329 IAC 9-1-45.5)

SECTION 9. 329 IAC 9-2-1 IS AMENDED TO READ AS FOLLOWS:

329 IAC 9-2-1 New UST systems

Authority: IC 13-14-8-1; IC 13-14-8-2; IC 13-23-1-1; IC 13-23-1-2

Affected: IC 13-11-2-184; IC 13-23; IC 25-31-1

Sec. 1. In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the UST system is used to store regulated substances, all owners and operators of new UST systems shall meet the following requirements:

- (1) Each tank must be properly designed and constructed, and any portion underground that routinely contains product must be protected from corrosion as specified under one (1) of the following:

- (A) The tank is constructed of fiberglass-reinforced plastic and meets one (1) of the following:

- (i) Underwriters Laboratories Standard 1316, "Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohol, and Alcohol-Gasoline Mixtures", revised 1996, Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, Illinois 60062.

- (ii) Underwriters Laboratories of Canada CAN/ULC-S615-1998, "Standard for Reinforced Plastic Underground Tanks for Flammable and Combustible Liquids", 1998, Underwriters Laboratories of Canada, 7 Crouse Road, Scarborough, Ontario, M1R 3A9 Canada.

- (iii) ASTM D4021-86, "Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks", revised 1992, American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959.

- (B) The tank is constructed of steel and cathodically protected in the following manner:

- (i) The tank is:

- (AA) coated with a suitable dielectric material; and is

- (BB) cathodically protected.

- (ii) Field-installed impressed current systems are designed by a corrosion expert to allow determination of current operating status under 329 IAC 9-3.1-2(3).

- (iii) Cathodic protection systems are operated and maintained under 329 IAC 9-3.1-2.

- (iv) The tank complies with one (1) or more of the following:

- (AA) Steel Tank Institute "sti-P₃® Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks", STI-P3-98, revised 1998, Steel Tank Association, 570 Oakwood Road, Lake Zurich, Illinois 60047.

- (BB) Underwriter Laboratories Standard 1746, "External Corrosion Protection Systems for Steel Underground Storage Tanks", 2000, Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, Illinois 60062.
- (CC) Underwriters Laboratories of Canada CAN/ULC-S603-92, "Standards for Steel Underground Tanks for Flammable and Combustible Liquids", 1992, Underwriters Laboratories of Canada, 7 Crouse Road, Scarborough, Ontario, M1R 3A9 Canada.
- (DD) Underwriter Laboratories of Canada CAN/ULC-S603.1-92, "Standard for Galvanic Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids", 1992, Underwriters Laboratories of Canada, 7 Crouse Road, Scarborough, Ontario, M1R 3A9 Canada.
- (EE) Underwriters Laboratories of Canada CAN4-S631-M84, "Isolating Bushings for Steel Underground Tanks Protected with Coatings and Galvanic Systems", 1992, Underwriters Laboratories of Canada, 7 Crouse Road, Scarborough, Ontario, M1R 3A9 Canada.
- (FF) NACE International (formerly the National Association of Corrosion Engineers) Standard RP0285-95, "Corrosion Control of Underground Storage Tank Systems by Cathodic Protection", revised 1995, NACE International, P.O. Box 218340, Houston, Texas 77218-8340.
- (GG) Underwriters Laboratories Standard 58, "Steel Underground Tanks for Flammable and Combustible Liquids", 1998, Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, Illinois 60062.
- (C) The tank is constructed of a steel-fiberglass-reinforced-plastic composite and complies with one (1) or more of the following:
 - (i) Underwriters Laboratories Standard 1746, "External Corrosion Protection Systems for Steel Underground Storage Tanks", 2000, Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, Illinois 60062.
 - (ii) Association for Composite Tanks ACT-100®, "Specification for External Corrosion Protection of FRP Composite Steel USTs, F894-98", revised 1998, Steel Tank Association, 570 Oakwood Road, Lake Zurich, Illinois 60047.
- (D) The tank is constructed of metal without additional corrosion protection measures provided that the following requirements are completed:
 - (i) The tank is installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life.
 - (ii) The owner and operator shall demonstrate that soil resistivity in an installation location is twelve thousand (12,000) ohms per centimeter or greater by using one (1) of the following:
 - (AA) ASTM Standard G57-95a, "Standard Test Method for Field Measurement of Soil Resistivity Using the Wenner Four-Electrode Method", revised 1995, reapproved 2001. American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959.
 - (BB) A standard approved by the commissioner that exhibits the same or greater degree of reliability and accuracy as ASTM Standard G57-95a cited in subitem (AA).

- (iii) The owner and operator shall maintain records that demonstrate compliance with items (i) and (ii) for the remaining life of the tank.
- (E) The tank construction and corrosion protection are determined by the commissioner to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than clauses (A) through (D).
- (2) The piping that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and protected from corrosion. The piping that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and protected from corrosion as specified under one (1) of the following:
 - (A) The piping is constructed of fiberglass-reinforced plastic and complies with one (1) or more of the following:
 - (i) Underwriters Laboratories Standard 971, "Nonmetallic Underground Piping for Flammable Liquids", 1995, Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, Illinois 60062.
 - (ii) Underwriters Laboratories Standard 567, revised 2001, "Pipe Connectors for Petroleum Products and LP Gas", Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, Illinois 60062.
 - (iii) Underwriters Laboratories of Canada Subject CAN/ORD-C 107.7-1993 "Glass Fibre Reinforced Plastic Pipe and Fittings for Flammable and Combustible Liquids", 1993 First Edition, Underwriters Laboratories of Canada, 7 Crouse Road, Scarborough, Ontario, M1R 3A9 Canada.
 - (iv) Underwriters Laboratories of Canada Standard CAN/ULC-S633-99, "Flexible Underground Hose Connectors for Flammable and Combustible Liquids", 1999, Underwriters Laboratories of Canada, 7 Crouse Road, Scarborough, Ontario, M1R 3A9 Canada.
 - (B) The piping is constructed of steel and cathodically protected in the following manner:
 - (i) The piping is:
 - (AA) coated with a suitable dielectric material; and is
 - (BB) cathodically protected.
 - (ii) Field-installed impressed current systems are designed by a corrosion expert to allow determination of current operating status under 329 IAC 9-3.1-2(3).
 - (iii) Cathodic protection systems are operated and maintained under 329 IAC 9-3.1-2.
 - (iv) The piping system meets one (1) or more of the following:
 - (AA) "Flammable and Combustible Liquids", of the Indiana Fire Code under rules of the fire prevention and building safety commission at 675 IAC 22.
 - (BB) American Petroleum Institute Recommended Practice 1615, "Installation of Underground Petroleum Storage Systems", Fifth Edition, March 1996, American Petroleum Institute, 1220 L Street NW, Washington, D.C. 20005-4070.
 - (CC) American Petroleum Institute Recommended Practice 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems", Third Edition, May 1996, American Petroleum Institute, 1220 L Street NW, Washington, D.C. 20005-4070.

(DD) Nace International (formerly the National Association of Corrosion Engineers) Standard RP0169-96, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems", 1996 Edition, NACE International, P.O. Box 218340, Houston, Texas 77218-8340.

(C) The piping is constructed of metal without additional corrosion protection measures provided that the following requirements are completed:

(i) The piping is installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life.

(ii) The owner and operator shall demonstrate that soil resistivity in an installation location is twelve thousand (12,000) ohms per centimeter or greater by using one

(1) of the following:

(AA) ASTM Standard G57-95a, "Standard Test Method for Field Measurement of Soil Resistivity Using the Wenner Four-Electrode Method", revised 1995, reapproved 2001. American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959.

(BB) A standard approved by the commissioner that exhibits the same or greater degree of reliability and accuracy as ASTM Standard G57-95a cited in subitem (AA).

(iii) The piping complies with one (1) or more of the following:

(AA) "Flammable and Combustible Liquids", of the Indiana Fire Code under rules of the fire prevention and building safety commission at 675 IAC 22.

(BB) Nace International (formerly the National Association of Corrosion Engineers) Standard RP0169-96, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems", 1996 Edition, NACE International, P.O. Box 218340, Houston, Texas 77218-8340.

(iv) The owner and operator shall maintain records that demonstrate compliance with items (i) and (ii) for the remaining life of the piping.

(D) Notwithstanding the requirements in section 1.1 of this rule, all connected piping, is installed or replaced after the effective date of the 2008 amendments to this rule, must be equipped with secondary containment, that includes and the connected piping and secondary containment must meet the following standards:

(i) Contain regulated substances released from the piping until the regulated substance can be detected and removed.

(ii) Prevent the release of regulated substances to the environment at any time during the operational life of the piping.

(iii) Be checked for evidence of a release by:

(AA) inventory control at least every thirty (30) days; and

(BB) pressure testing upon installation, again six (6) months after installation, and every thirty-six (36) months thereafter.

(iv) The interstitial monitoring device must be located in the interstitial space between the walls and meet the following as appropriate:

(AA) The interstitial space is under a vacuum or pressure.

(BB) The interstitial space is liquid-filled.

(CC) The interstitial space is monitored continually.

- (v) Was or will be installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability and running conditions.
- (vi) Monitoring devices between the inner and outer barriers of the piping can detect a leak or release of product from the primary barrier.
- (vii) Meets the standard Underwriters Laboratory Standard 971, "Nonmetallic Underground Piping for Flammable Liquids", 1995, Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, Illinois 60062.
- (viii) Is either of the following:

- (AA) Connected piping is one hundred percent (100%) secondarily contained.

- (BB) Secondarily contained piping with single-walled piping ends that terminate in tank and dispenser sumps.

- (ix) Include one (1) of the following:

- (i) (AA) Double-walled piping that consists of an outer wall constructed of a dielectric material.

- (ii) (BB) Vaulted piping.

- (x) After the effective date of the 2008 amendments to this rule, any construction design releases:

- (AA) that were issued by the department of homeland security, division of fire and building safety under rules of the fire prevention and building safety commission at 675 IAC 12-12; and

- (BB) where construction has not commenced; must be amended to include secondary containment of connected piping that meets all the standards of this subdivision and resubmitted for release by the department of homeland security, division of fire and building safety. For purposes of this item, "release" does not have the meaning as specified in IC 13-11-2-184.

(E) The piping construction and corrosion protection are determined by the commissioner to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than **the requirements of** clauses (A) through (D).

- (3) The following spill and overfill requirements must be completed:

(A) Except as provided in clause (B), the owner and operator shall use the following spill and overfill prevention equipment to prevent spilling and overfilling associated with product transfer to the UST system:

- (i) Spill prevention equipment that prevents the release of product to the environment when the transfer hose is detached from the fill pipe as one (1) of the following:

- (AA) Minimum five (5) gallon spill catchment basin with drain to tank.

- (BB) Minimum twenty-five (25) gallon spill catchment basin without drain to tank.

- (ii) Overfill prevention equipment that completes one (1) of the following:

- (AA) Automatically shuts off flow into the tank when the tank is ~~no~~ **not** more than ninety-five percent (95%) full.

- (BB) Alerts the transfer operator when the tank is ~~no~~ **not** more than ninety percent (90%) full by restricting the flow into the tank or triggering a high level alarm.
- (CC) Restricts flow thirty (30) minutes prior to overfilling, alerts the transfer operator with a high level alarm one (1) minute before overfilling, or automatically shuts off flow into the tank so that none of the fittings located on top of the tank are exposed to product due to overfilling.
- (B) The owner and operator are not required to use the spill and overfill prevention equipment specified in clause (A) if one (1) of the following is completed:
 - (i) Alternative equipment is used that is determined by the commissioner to be ~~no~~ **not** less protective of human health and the environment than the equipment specified in clause (A).
 - (ii) The UST system is filled by transfers of ~~no~~ **not** more than twenty-five (25) gallons at one (1) time.
- (C) A drop tube for deliveries must extend to within one (1) foot of the tank bottom.
- (4) Under-dispenser containment, as defined in 329 IAC 9-1-45.5, is required for the following:**
 - (A) Any new motor fuel dispenser installed at a new underground storage tank facility.**
 - (B) Any new motor fuel dispenser installed at a new location at an existing underground storage tank facility.**
 - (C) Any replaced motor fuel dispenser installed at an existing underground storage tank facility where the replaced piping or equipment is added to the underground storage tank system to connect the replaced dispenser to the existing system.**
- ~~(4)~~ **(5)** All tanks and piping must be installed properly in accordance with one (1) or more of the following:
 - (A) American Petroleum Institute Recommended Practice 1615, "Installation of Underground Petroleum Storage Systems", Fifth Edition, March 1996, American Petroleum Institute, 1220 L Street NW, Washington, D.C. 20005-4070.
 - (B) Petroleum Equipment Institute Publication PEI/RP100-2000, "Recommended Practices for Installation of Underground Liquid Storage Systems", 2000, Petroleum Equipment Institute, P.O. Box 2380, Tulsa, Oklahoma 74101-2380.
 - (C) American National Standards Institute Standard ANSI/ASME B31.3-1999, "Process Piping", 1999, American National Standards Institute, 11 West 42nd Street, New York, New York 10036.
 - (D) American National Standards Institute Standard ANSI/ASME B31.4-1998 Edition, "Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids", 1998, American National Standards Institute, 11 West 42nd Street, New York, New York 10036.
- ~~(5)~~ **(6)** The owner and operator shall ensure the following:
 - (A) The installer has been certified by the ~~office of the state fire marshal~~ **department of homeland security, division of fire and building safety** under rules of the fire prevention and building safety commission at 675 IAC 12-12.
 - (B) One (1) or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with subdivision (4):
 - (i) The installer has been certified by the tank and piping manufacturers.

- (ii) The installation has been inspected and certified by a registered professional engineer under IC 25-31-1 with education and experience in UST system installation.
 - (iii) The installation has been inspected and approved by one (1) of the following:
 - (AA) The agency.
 - (BB) The ~~office of the state fire marshal~~ **department of homeland security, division of fire and building safety**.
 - (iv) The owner and operator have complied with another method for ensuring compliance with subdivision (4) that is determined by the commissioner to be ~~no~~ **not** less protective of human health and the environment.
 - (C) The owner and operator shall provide a certification of compliance on the notification form under section 2 of this rule.
- (Solid Waste Management Board; 329 IAC 9-2-1; filed Dec 1, 1992, 5:00 p.m.: 16 IR 1068; filed Jul 19, 1999, 12:00 p.m.: 22 IR 3695; errata filed Sep 10, 1999, 9:08 a.m.: 23 IR 26; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535; filed Aug 30, 2004, 9:35 a.m.: 28 IR 148)*

SECTION 10. 329 IAC 9-2-2 IS AMENDED TO READ AS FOLLOWS:

329 IAC 9-2-2 Notification requirements

Authority: IC 13-14-8-1; IC 13-14-8-2; IC 13-23-1-1; IC 13-23-1-2

Affected: IC 13-23-3

Sec. 2. (a) All notifications required to be submitted under this section must be submitted on a form and in a format prescribed by the commissioner.

(b) Any person who owns an UST system or tank shall, within thirty (30) days of owning such an UST system or tank or bringing such tank or UST system into use, submit notice to the agency to register the tank or UST system. Bringing a tank or UST system "into use" means the tank or UST system contains or has:

- (1) contained a regulated substance; and ~~has~~
- (2) not been closed under 329 IAC 9-6.

(c) An owner required to submit notice under this section shall provide notice for each tank the owner owns. The owner may provide notice for several tanks at one (1) location using one (1) form. An owner with tanks located in more than one (1) place of operation shall submit a separate notification form for each separate place of operation.

(d) An owner required to submit notice under this section shall provide all the information required by the form provided by the agency for each tank for which notice is submitted.

(e) All owners and operators of new **or replaced** UST systems shall certify, on each notification form submitted, with original signature in ink, compliance with the following requirements:

- (1) Installation of all tanks and piping under section 1(5) of this rule.

- (2) Cathodic protection of steel tanks and piping under section 1(1) and 1(2) of this rule.
- (3) Release detection under 329 IAC 9-7-2 and 329 IAC 9-7-3.
- (4) Financial responsibility under 329 IAC 9-8.

(f) All owners and operators of UST systems shall ensure that whoever performs tank system:

- (1) installations;
- (2) testing;
- (3) upgrades;
- (4) closures;
- (5) removals; and
- (6) change-in-service;

is certified by the ~~office of the state fire marshal~~ **department of homeland security, division of fire and building safety**. The certified person who performs the work shall certify, by original signature in ink on the notification form provided by the agency, that the work performed complies with methods specified by section 1(4) of this rule.

(g) All owners and operators of UST systems who upgrade the tank system to meet upgrade requirements under 329 IAC 9-2.1 shall, within thirty (30) days of completing the upgrade, submit notice of the upgrade to the agency.

(h) All owners and operators of UST systems who:

- (1) temporarily close a tank system under 329 IAC 9-6-5; or
- (2) close a tank system under 329 IAC 9-6-1;

shall, within thirty (30) days of completing such action, submit notice of this action to the agency.

(i) All owners and operators of UST systems who install a method of release detection under 329 IAC 9-7-2 and 329 IAC 9-7-3 shall, within thirty (30) days of completing such action, submit notice of this action to the agency.

(j) Any person who sells a facility with a regulated underground storage tank that:

- (1) is being used as an UST system; or
- (2) will be used as an UST system;

shall notify the purchaser of such tank of the owner's obligation to submit notice under subsection (b).

(k) An owner and operator of an UST system that is:

- (1) in the ground on or after May 8, 1986; and
- (2) not taken out of operational life on or before January 1, 1974;

shall notify the agency of the service status of the UST system under 42 U.S.C. 6991a of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6901, et seq., in effect on September 30, 1996, on a form provided by the agency for this notification.

(Solid Waste Management Board; 329 IAC 9-2-2; filed Dec 1, 1992, 5:00 p.m.: 16 IR 1068; filed Jul 19, 1999, 12:00 p.m.: 22 IR 3699; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535; filed Aug 30, 2004, 9:35 a.m.: 28 IR 150; errata filed Oct 7, 2004, 11:55 a.m.: 28 IR 608)

SECTION 11. 329 IAC 9-3-1.2 IS ADDED TO READ AS FOLLOWS:

329 IAC 9-3-1.2 Secondary containment

Authority: IC 13-14-8-1; IC 13-14-8-2; IC 13-23-1-1; IC 13-23-1-2

Affected: IC 13-23

Sec. 1.2. The owner and operator of an UST system shall have all newly installed tanks and piping or all replaced tanks and piping secondarily contained as required under section 329 IAC 9-2-1(1), 329 IAC 9-2-1.1(b)(1), 329 IAC 9-7-3(2) for tanks, and 329 IAC 9-2-1(2)(D) and 329 IAC 9-2-1.1(b)(2) for piping.

(Solid Waste Management Board; 329 IAC 9-3-1.2)

SECTION 12. 329 IAC 9-1-27.4 IS REPEALED.